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HIGHER CROP YIELDS FROM IMPROVED SOILS

corn soybeans wheat oats legumes grasses

Purdue University
Agricultural Extension Service

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RYE GRASS IN INDIANA

Agronomy Department

Rye grass, also listed as domestic rye grass, is mainly Italian rye grass with a little English perennial, either mixed in or hybridized, or both. Rye grass is a winter annual or, at best, a short lived perennial. Seeded in late summer or early fall, it ripens the following summer and then most of it dies. Subsequent growth must come from volunteer seedings or reseeding. It is often included in lawn mixtures because of its very rapid growth and distinctive shiny leaves.

Adaptation: Rye grass with its quick top growth and heavy root development is the outstanding grass to use as a winter cover crop. Its heavy root system makes it effective in erosion control and in improvement of soil tilth. It will not be winter hardy every year in northern Indiana but is still the best grass cover crop available. Rye grass is extensively used in Pennsylvania, seeded in corn, as a winter cover crop. It has given good results in Ohio and Wabash river bottoms when seeded in corn at the last cultivation. On land that is properly limed and not drouthy, yellow blossom sweet clover seeded with rye grass should give additional fertility value over rye grass alone.

Rye grass may also be seeded in the Spring to serve for early summer pasture in place of oats, and as a nurse crop for other longer lived legumes and grasses. As a pasture crop it is highly palatable in the early growth stage.

Possibilities:

1. As a seed crop, rye grass is quite productive so that seed prices should remain reasonable.
2. Its heavy rooting and quick growth make it especially promising as a soil binding winter cover to prevent erosion and to serve as a fall and early spring pasture.
3. It is an excellent companion crop with crimson clover and vetches where either may be grown. The combination of rye grass and legumes makes a better growth than either sown alone.
4. Where lespedeza is pastured, cut for hay or harvested for seed, the seeding of rye grass on the unprepared seed bed will prevent erosion and furnish additional pasture. (For best results, especially in dry seasons, seed should be covered with harrow or grain drill.)
5. Seeded in corn at the last cultivation or later it makes a better cover and develops a stronger root system than rye. Likewise it may be seeded on other unprepared land that would otherwise remain unprotected.
6. Because of its rapid growth rye grass may serve well to thicken up temporarily otherwise poor stands of pastures and meadows.
7. Rye grass may well be included as a part of a pasture mixture, seeded in the fall or spring with other grasses and legumes, to furnish additional early grazing while the slower growing grasses become established. In such cases not more than five lbs. of rye grass per acre should be used and less on fertile soils.
8. Rye grass may be grown as a cash crop where hardy and adapted. In Kentucky seed yields have varied from 200 to 1200 lbs. per acre.

It may be harvested with a combine or grain binder. In either method of harvesting the seed shatters freely. To prevent heating of combined seed it should be recleaned to remove material and then stored shallow where it can be turned if necessary.

9. Rye grass may be grazed in the spring, as in the case of small grains, and then harvested later for seed. The subsequent reduction in seed yield will be determined by how late grazing is continued in the summer. Rye grass matures about the time of spring sown oats.

10. Altho rye grass does well on medium to thin soil it is very responsive to fertilization which adds materially to the pasturage and reduces loss from winter injury. Rye grass grows well on land too wet for some fall seeded crops, and will survive considerable flooding.

Avoid Using Under Following Conditions:

1. Rye grass should not be expected to take the place of more permanent grasses or grass legume combinations. At best it may serve as a supplement to such grasses.

2. Rye grass should not be seeded in the fall with wheat or other small grains to be harvested. In such cases it likely will reduce the yield of small grain and may interfere with their proper harvesting.

3. Seeded heavy enough for a cover crop, if used as a nurse crop, rye grass will make such a dense top and root growth as to smother out or seriously injure other seedings.

Culture: The success farmers have had with rye grass on the poorer and more acid soil types in Kentucky and its apparent ability to establish stands with little if any seed bed preparation indicate that it is equally useful under similar situations in southern Indiana counties. Trial plantings should be made in other parts of the state to determine the regions in which it is safely winter hardy.

The greatest value of rye grass for Indiana farms appears to be as a cover crop to control erosion and provide fall and early spring pasture. It may well serve these purposes where seeded in corn at the last cultivation where corn is followed by corn or soybeans. The rate of seeding for this purpose is 15 lbs. per acre. From 10 to 20 lbs. of seed per acre may be used when seeded in lespedeza which has been cut for hay or pastured or under other similar situations. There is a possibility that mixed stands of rye grass and lespedeza may be harvested as both make seed the same season, with proper management of spring grazing to prevent smothering of lespedeza by a thick growth of rye grass. Where a seed crop of rye grass is harvested enough shattering occurs to reseed the land if seed is worked into the soil. It may be possible thru proper grazing management and some supplemental seeding to maintain mixed stands of rye grass and lespedeza which would furnish good grazing continuously from early spring until late fall.

Ten pounds per acre is sufficient when used with crimson clover or vetch. The seed may be sown by hand or with any seeding equipment. It should be seeded in late summer or early fall from July to mid-September.

An application of 200 to 400 lbs. of 3-12-12 fertilizer per acre when seeded with legumes or a similar rate of 8-8-8 when seeded alone or with other grasses will give rapid establishment, heavy rooting and extra top growth for grazing.

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